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Gas stream refrigeration load equival nt (Tons):

6.14

Air-cooled chiller unit power input energy (kWh):

8.60

Adsorption compressor power savings (kWh):

(Table 2 value 47.01 kW -Table 3 value 40.96 kW) x I Hr. 6.05

Total net added power required by system (kWh):

2.55

Total net added power for 3.75 ton/Hr oxygen (kWh/Ton rate):

0.68

While the invention has been described in its preferred embodiments, it is appreciated that system and apparatus variations may be made to maximize gas separation performance of numerous individual available molecular sieve materials that can be chosen for efficient separation of gases at various system TPD rated capacities and site conditions, without departing from the scope and spirit of the invention.

I claim:

(Transferred Text)

- 1. A pure vacuum swing gas adsorption system and apparatus means for use in the separation of one or more desired molecular gases from a supplied feedstock stream of mixed molecular weight gases of greater number, the said gas separation system and apparatus means hereafter referred to as the Pure VSA Separation System comprising:
- (a) a combined system design and apparatus means therein collectively performing both a gas adsorption and a gas desorption operational sequence to achieve the desired efficient separation of gases;
 - (b) a unique design of adsorption-desorption assembly apparatus;
 - (c) gas compressors having high gas compression efficiencies;
- (d) a combined system and apparatus means wherein gas flows within both the adsorption and desorption sequential operations are flow induced by low absolute